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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA-2011-0145]

Federal Motor Vehicle Safety Standard No. 108; Lamp, reflective devices, and associated equipment

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Request for comments on technical report.

SUMMARY: This notice requests comments on a technical report which evaluates new approaches for the regulation of motor vehicle lighting performance. Since 1968, the lighting standard in the United States has been updated incrementally, while lighting technologies have in some ways changed dramatically. We are requesting comments on the general approaches and specific technical merits presented in this report. These comments, in conjunction with the agency's overall priorities, will be used to shape our next steps.

DATES: Comments must be received no later than **[INSERT 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: *Report:* The technical report is available on the internet for viewing in PDF format at <http://www.regulations.gov> and search for this docket number. You may obtain a copy of the report free of charge by sending a self-addressed mailing label to Markus Price (NVS-121), National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590.

Comments: You may submit comments

[identified by Docket Number NHTSA–2011–0145] by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the online instructions for submitting comments.
- *Fax:* 1–202–493–2251.
- *Mail:* Docket Management Facility, M–30, U.S. Department of Transportation, West Building, Ground Floor, Rm. W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- *Hand Delivery:* West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., between 9 a.m. and 5 p.m. Eastern Time, Monday through Friday, except Federal holidays.

You may call Docket Management at 202–366–9826.

Instructions: For detailed instructions on submitting comments, see the Procedural Matters section of this document. Note that all comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided.

FOR FURTHER INFORMATION CONTACT: For non-legal issues, you may call Mr. Markus Price, Office of Crash Avoidance Standards (Phone: 202-366-0098; FAX: 202-366-7002).

You may send mail to this official at: National Highway Traffic Safety Administration, 1200 New Jersey Avenue, S.E., Washington, D.C. 20590.

SUPPLEMENTARY INFORMATION:

Federal Motor Vehicle Safety Standard (FMVSS) No. 108, Lamps, reflective devices, and associated equipment, is a complex motor vehicle standard that has been in

effect for several decades. The agency contracted for the preparation of a technical report, “Feasibility of New Approaches for the Regulation of Motor Vehicle Lighting Performance,” which discusses the feasibility of new approaches to regulating motor vehicle lighting equipment. The report examines ways to effectively achieve the purposes of the performance requirements of FMVSS No. 108, which is to reduce crashes and injuries by increasing the conspicuity of motor vehicles and adequately illuminating the roadway. The report is available in the docket NHTSA-2011-0145.

The report identifies several potential opportunities for performance requirements in the following areas: headlighting photometry, headlamp test voltage, sensitivity of headlamps to vertical aim, luminance of signaling and marking lamps, masking of front turn signals, and reliability of photometric testing. The report also examines other areas, including physical lamp testing and signal lamp angular photometry.

In addition to a literature review, the authors of this report consulted experts within the lighting community through SAE International. These experts were consulted on the potential effects of requirements that are primarily vehicle-based. To increase transparency and broaden the input regarding this report, this notice requests comments from the public. We are specifically interested in both the technical approaches taken in the report, as well as thoughts about the impact on the certification process if such an approach were taken by the agency. We request comment on any area examined in the report that could increase or decrease the protection currently provided to the traveling public.

Whole-vehicle testing (lower and upper beam headlighting) – We are seeking comment on the approach that closely aligns potential requirements with the ability of a

vehicle lighting system to provide visibility for vehicle navigation while limiting the impacts of glare. Our current standard primarily treats a headlamp as a separate piece of safety equipment that is installed on a motor vehicle with various height and width restrictions. Based on various assumptions, the report translates the angular photometric requirements for each lamp in the current standard into areas in three-dimensional space around the vehicle. These areas around the vehicle are then easily correlated to various objects on the roadway, such as oncoming driver eye locations and overhead signs positions.

Headlamp test voltage – We are seeking comment on ways to closely align the test input parameters of headlamps with those experienced on vehicles in the real world. Currently, headlamps are required to meet our photometry requirements when tested at 12.8 V. Many vehicles currently operate above this voltage by design. Accordingly, the report recommends a test voltage of 13.2 V because it would closely represent the way headlamps operate on the road.

Asymmetrical headlighting – We would like comments from the public on the merits and practicality of allowing significantly different performance from different headlamps mounted on the vehicle. The report investigates the potential for such headlighting systems to provide superior glare control; however, it also notes potential issues when considering the current marking functions of headlamps as well as the current redundancy within photometry.

Adaptive forward lighting – We are seeking comment with respect to the regulation of headlamps that adapt to roadway conditions. This report does not evaluate the benefits of the various methods of adaptive forward lighting. The report notes that

the whole-vehicle testing approach discussed above may provide a natural framework for which adaptive forward lighting requirements could be established in the future. The report notes that given that the current standard addresses headlamp photometry independent of the specifics of the vehicle on which it is installed, it may be difficult to evaluate the effectiveness of modifying the aim, or beam pattern of the headlighting system in a dynamic environment. We are seeking comment on how the approaches presented in the report could provide a foundation for dynamic evaluation of the headlighting system in the future.

Headlamp aim – We are seeking comment on the expected impacts of the approaches investigated in this report on headlamp aim. While it is clear that headlamp aim can be a critical factor in determining the ability of a headlighting system to adequately illuminate the roadway as well as limit glare, our current standard does not require that headlamps be aimed as installed on a new motor vehicle. The report notes that under the whole vehicle testing approach discussed above, headlamp aim would not be considered separately from headlamp photometry as the measurement of the headlighting system would take into account and measure the amount of light directed toward various regions of space surrounding the vehicle. Accordingly, headlamp aim would become an integral part of the headlighting system performance.

Signal lamp luminance – We are seeking comment on how to measure the ability to see signal lighting beyond measuring intensity and the number of lighted sections. The judgment of brightness is most similar to the measurement of luminance; that is, luminous intensity, measured in candela, divided by the area from which light is emitted, measure in cm^2 . Our current standard addresses signal lamp luminance in a somewhat

indirect way. While we directly measure the luminous intensity of a lamp, for the purposes of luminance, we approximate the area from which the light is emitted based on the number of lighted sections. We are seeking comment on the ability for new computer based design systems to more directly measure the area from which light is emitted and any potential benefits of directly calculating signal lamp luminous as well as any potential issues associated with the approaches presented in the report.

In addition, NHTSA also seeks comments regarding which of the above areas have the most potential for improving motor vehicle safety. We are interested in public input on which areas to prioritize based on potential safety benefits, considering the availability of limited agency resources.

Procedural Matters

How can I influence NHTSA's thinking on this subject? NHTSA welcomes public review of the technical report and will review and analyze the comments received.

How do I prepare and submit comments? Your comments must be written and in English. To ensure that your comments are correctly filed in the Docket, please include the Docket number of this document (NHTSA–2011–0145) in your comments. Your primary comments must not be more than 15 pages long (49 CFR 553.21). However, you may attach additional documents to your primary comments. There is no limit on the length of the attachments. Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR19477) or you may visit <http://regulations.gov>.

Please send two paper copies of your comments to Docket Management, fax them, or use the Federal eRulemaking Portal. The mailing address is U. S. Department of Transportation, Docket Management Facility, M-30, West Building, Ground Floor, Rm. W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590. The fax number is 1-202-493-2251. To use the Federal eRulemaking Portal, go to

<http://www.regulations.gov> and follow the online instructions for submitting comments.

We also request, but do not require you to send a copy to Markus Price, Safety Standards Engineer, Visibility and Injury Prevention, NVS-121, National Highway Traffic Safety Administration, Room W53-312, 1200 New Jersey Avenue, SE., Washington, DC 20590 (or e-mail them to *markus.price@dot.gov*). He can check if your comments have been received at the Docket and he can expedite their review by NHTSA.

How can I be sure that my comments were received? If you wish Docket Management to notify you upon its receipt of your comments, enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon receiving your comments, Docket Management will return the postcard by mail.

How do I submit confidential business information? If you wish to submit any information under a claim of confidentiality, send three copies of your complete submission, including the information you claim to be confidential business information, to the Chief Counsel, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590. Include a cover letter supplying the information specified in our confidential business information regulation (49 CFR Part 512). In addition, send two copies from which you have deleted the claimed confidential business information to U.S. Department of Transportation, Docket

Management Facility, M-30, West Building, Ground Floor, Rm. W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, or submit them via the Federal eRulemaking Portal.

Will the agency consider late comments? In our response, we will consider all comments that Docket Management receives before the close of business on the comment closing date indicated above under **DATES**. To the extent possible, we will also consider comments that Docket Management receives after that date. Please note that even after the comment closing date, we will continue to file relevant information in the Docket as it becomes available. Further, some people may submit late comments. Accordingly, we recommend that you periodically check the Docket for new material.

How can I read the comments submitted by other people? You may read the materials placed in the docket for this document (*e.g.*, the comments submitted in response to this document by other interested persons) at any time by going to

<http://www.regulations.gov>. Follow the online instructions for accessing the dockets.

You may also read the materials at the Docket Management Facility by going to the street address given above under **ADDRESSES**. The Docket Management Facility is open between 9 a.m. and 5 p.m. Eastern Time, Monday through Friday, except Federal holidays.

Issued: July 5, 2012

Christopher J. Bonanti
Associate Administrator for Rulemaking

Billing Code 4910-59-P

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